

Statement of the Claims:

1. (Previously presented) An apparatus for delivering an intravascular drug, said apparatus comprising:

a) a first catheter tube having a proximal end, a distal end, and a fluid lumen extending from its proximal end to its distal end;

b) an inflatable balloon coupled to said distal end of said first catheter and in fluid communication with said fluid lumen;

c) a second catheter tube having a proximal end, a distal end, and a lumen extending from its proximal end to its distal end, said first catheter tube extending through said lumen of said second catheter tube;

d) a self-expanding element coupled to said distal end of said second catheter tube, said first catheter tube extending through said self-expanding element; and

e) a third catheter tube having a proximal end, a distal end, and a lumen extending from its proximal end to its distal end, said second catheter tube extending through said lumen of said third catheter tube, wherein

at least one of said second catheter tube and said third catheter tube is adapted to receive and deliver the intravascular drug to the location of said self-expanding element.

2. (Previously presented) An apparatus according to claim 1, wherein:

said first catheter tube has a lumen extending from its proximal end to its distal end.

3. (Previously presented) An apparatus according to claim 1, wherein:

said second catheter tube is adapted to receive and deliver the intravascular drug, and

said self-expanding element includes a plurality of fluid pores, said fluid pores being in fluid communication with said lumen of said second catheter tube.

4. (Original) An apparatus according to claim 1, wherein:

said second catheter tube is adapted to receive and deliver the intravascular drug, and

said distal end of said lumen of said second catheter tube has a plurality of fluid pores.

5. (original) An apparatus according to claim 1, wherein:

said third catheter tube is adapted to receive and deliver the intravascular drug.

6. (Original) An apparatus according to claim 1, wherein:

said third catheter tube has a proximal locking means for locking the location of said second catheter tube relative to said third catheter tube.

7. (Original) An apparatus according to claim 1, wherein:

said first catheter tube is adapted to receive the intravascular drug by having a proximal port in fluid communication with said fluid lumen of said first catheter tube.

8. (Original) An apparatus according to claim 1, wherein:

said second catheter tube is adapted to receive the intravascular drug by having a proximal port at said proximal end of said second catheter tube in fluid communication with said fluid lumen of said second catheter tube.

9. (canceled)

10. (Previously presented) An apparatus according to claim 1, further comprising:

f) a drug dispenser having a drug reservoir and a drug outlet, said drug outlet being fluidly coupled to said fluid delivery means, said drug dispenser being adapted to automatically dispense the drug from the reservoir into the fluid delivery means as said second catheter tube is moved relative to said first catheter tube.

11. (Previously presented) An apparatus according to claim 10, wherein:

said drug reservoir is a syringe having a plunger, and

said drug dispenser includes means for moving said plunger as said second catheter tube is moved relative to said first catheter tube.

12. (original) An apparatus according to claim 11, wherein:

said means for moving said plunger includes a gear coupled to said plunger, a spool coupled to said gear, and a filament, ribbon, or cable coupled to said spool.

13. (original) An apparatus according to claim 10, wherein:

said drug dispenser includes means for coupling said drug reservoir to a patient's limb.

14. (original) An apparatus according to claim 10, wherein:

said drug dispenser includes means for coupling said drug reservoir to one of said catheter tubes.

15. (original) An apparatus for delivering an intravascular drug, said apparatus comprising:

- a) a catheter having a proximal end, a distal end, and a lumen extending from its proximal end to its distal end;
- b) a drug reservoir having a drug outlet, said drug outlet being fluidly coupled to the proximal end of the lumen of the catheter,
- c) dispensing means coupled to said drug reservoir, said dispensing means being adapted to automatically dispense the drug from the reservoir into the lumen of the catheter as the catheter is moved through a blood vessel.

16. (original) An apparatus according to claim 15, wherein:

- said drug reservoir is a syringe having a plunger, and
- said dispensing means includes means for moving said plunger as said catheter is moved through a blood vessel.

17. (original) An apparatus according to claim 16, wherein:

- said means for moving said plunger includes a gear coupled to said plunger, a spool coupled to said gear, and a filament or cable coupled to said spool.

18. (original) An apparatus according to claim 15, further comprising:

- d) attachment means for attaching said drug reservoir to a patient's limb.

19. (original) An apparatus according to claim 15, further comprising:

d) attachment means for attaching said drug reservoir to said catheter.

20. (Previously presented) An apparatus for delivering an intravascular drug, said apparatus comprising:

a) a first catheter tube having a proximal end, a distal end, and a lumen extending from its proximal end to its distal end;

b) a self-expanding element coupled to said distal end of said first catheter tube; and

c) a second catheter tube having a proximal end, a distal end, and a lumen extending from its proximal end to its distal end, said first catheter tube extending through said lumen of said second catheter tube, wherein

at least one of said first catheter tube and said self-expanding element includes pores, and said first catheter tube is adapted to receive and deliver the intravascular drug to said pores.

21. (Previously presented) An apparatus according to claim 20, wherein:

said self-expanding element is comprised of spring wires and a thin membrane coupled to said spring wires.

22. (Previously presented) An apparatus according to claim 20, wherein:

said self-expanding element includes an abrasive outer surface.

23. (Previously presented) An apparatus according to claim 20, wherein:

said self-expanding element is made of plastic.

24. (Previously presented) An intravascular apparatus, comprising:

a) a first catheter tube having a proximal end, a distal end, and a lumen extending from its proximal end to its distal end;

b) a self-expanding element coupled to said distal end of said second catheter tube and having an abrasive outer surface; and

c) a second catheter tube having a proximal end, a distal end, and a lumen extending from its proximal end to its distal end, said first catheter tube extending through said lumen of said second catheter tube.

25. (Previously presented) An intravascular apparatus according to claim 24, wherein:

at least one of said first catheter tube and said self-expanding element includes pores, and said first catheter tube is adapted to receive and deliver an intravascular drug to said pores.

26. (canceled)

27. (canceled)

28. (canceled)

29. (canceled)

30. (original) A method of delivering an intravascular drug to a blood vessel, said method comprising:

a) delivering a first catheter via an incision to a first location in the blood vessel;

b) dispensing the intravascular drug through the first catheter while moving the first catheter from the first location to a second location as the first catheter is at least partially pulled out of the incision; and

c) removing the first catheter from the blood vessel.



31. (Previously presented) A method according to claim 30,  
wherein:

said delivering a first catheter to a first location includes delivering said first catheter and a second catheter having an occlusion element at a distal end thereof to the first location, and actuating the occlusion element.

32. (Previously presented) A method according to claim 30,  
wherein:

said first catheter has a self-expanding element coupled to a distal end thereof, and

said dispensing includes dispensing the drug proximal to the self-expanding element.

33. (Previously presented) A method according to claim 32,  
wherein:

at least one of said catheter and said self-expanding element include pores, and said dispensing includes dispensing the drug through said pores.

34. (Previously presented) A method according to claim 32,  
wherein:

said delivering a first catheter to a first location includes  
delivering said first catheter and a second catheter to said first  
location, said second catheter extending over said first catheter  
and said self-expanding element, said method further comprising

withdrawing said second catheter from over said self-  
expanding element, wherein

said dispensing includes dispensing the drug through said  
second catheter.

35. (canceled)

36. (canceled)

37. (canceled)

38. (canceled)

39. (canceled)

40. (canceled)

41. (Previously presented) A method for treating a varicose vein, comprising:

- a) delivering a first catheter having an occlusion element coupled at a distal end thereof through an incision and up the varicose vein;
- b) causing the occlusion element to occlude the varicose vein; and
- c) dispensing a sclerosing agent proximal to the occlusion element.

42. (Previously presented) A method according to claim 41, wherein:

said occlusion element is a balloon, and said causing the occlusion element to occlude comprises causing said balloon to expand.

43. (Previously presented) A method according to claim 41, wherein:

said occlusion element is self-expanding.

44. (Previously presented) A method according to claim 43, further comprising:

- d) providing a second catheter over said first catheter and over said self-expanding occlusion element.

45. (Previously presented) A method according to claim 44,  
wherein:

said occlusion element is a self-expanding balloon, and said  
expanding comprises withdrawing said second catheter from over  
said self-expanding balloon.

46. (Previously presented) A method according to claim 42,  
wherein:

said causing said balloon to expand comprises inflating said  
balloon.

47. (Previously presented) An apparatus according to claim 11,  
wherein:

said means for moving said plunger includes a filament, pull  
wire, ribbon, or cable.

48. (Previously presented) An apparatus according to claim 16,  
wherein:

said means for moving said plunger includes a filament, pull  
wire, ribbon, or cable.

49. (Previously presented) An apparatus according to claim 48,  
further comprising:

d) attachment means for attaching said drug reservoir to a  
patient's limb.

50. (Previously presented) An apparatus according to claim 48, further comprising:

d) attachment means for attaching said drug reservoir to said catheter.